

TRADUCCIÓN PÚBLICA-----

A 8004973-----

ESTADOS UNIDOS DE AMÉRICA-----

A QUIEN CORRESPONDA:-----

DEPARTAMENTO DE COMERCIO DE LOS ESTADOS UNIDOS-----

Oficina de patentes y marcas de los Estados Unidos-----

7 de junio de 2019-----

POR LA PRESENTE SE CERTIFICA QUE EL DOCUMENTO ADJUNTO ES UNA COPIA FIEL DEL
REGISTRO DE ESTA OFICINA DE UN DOCUMENTO REGISTRADO EL 2 DE JULIO DE 2018.-----

**Por autoridad del Subsecretario de Comercio para la Propiedad Intelectual y del Director de la Oficina
de Patentes y Marcas de los Estados Unidos**-----

[Aparece una firma] W. Montgomery, Funcionario de Certificaciones-----

[Aparece un sello dorado que lee:] Oficina de patentes y marcas de los Estados Unidos. Departamento de
Comercio.-----

504986491 02 / 07 / 2018-----

HOJA DE PORTADA PARA CESIÓN DE PATENTE-----

Versión electrónica v1.1-----

Versión impresa v1.2-----

N.º de ID EPAS: PAT5033237-----

TIPO DE PRESENTACIÓN: NUEVA CESIÓN-----

NATURALEZA DE LA TRANSMISIÓN: CESIÓN-----

DATOS DE LA PARTE QUE TRANSMITE-----

Nombre	Fecha de formalización
LEONCIO ANGEL GONZALEZ	29 / 06 / 2018

DATOS DE LA PARTE QUE RECIBE-----

Denominación:	SUNSTAR AMERICAS, INC.
Domicilio:	301 E. CENTRAL ROAD
Ciudad:	SCHAUMBURG
Estado / país:	ILLINOIS
Código postal:	60195

NÚMERO TOTAL DE TÍTULOS: 1-----

Tipo de propiedad	Número
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Número de solicitud:	62674149
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DATOS DE CORRESPONDENCIA -----

Número de fax: (312)222-0818 -----

La correspondencia será enviada en primer lugar a la dirección de correo electrónico; si no resultara válida, se procederá al envío usando el número de fax, en caso de haber sido facilitado, si no resultara válido, será enviada a través de correo postal. -----

Teléfono: 312-222-0800-----

Correo electrónico: chiipdocket@michaelbest.com -----

Nombre para correspondencia: MICHAEL BEST & FRIEDRICH LLP-----

Línea de dirección 1: 444 W. LAKE STREET -----

Línea de dirección 2: SUITE 3200-----

Línea de dirección 4: CHICAGO, ILLINOIS 60606-----

N.º de expediente del abogado: 200700-9637-US01 -----

Nombre del presentador: MICHAEL P. SANTONOCITO -----

Firma: / michael p. santonocito / -----

Fecha de la firma: 02 / 07 / 2018-----

Documentos adjuntos totales: 2-----

source=200700-9637-US01_Gonzalez_Assignment_filed_7-2-18#page1.tif -----

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[Margen inferior izquierdo:] **504986491**-----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0283**-----

CESIÓN -----

En virtud de mi obligación hacia SUNSTAR AMERICAS, INC. (en lo sucesivo denominada “Cesionario”), una sociedad anónima de Delaware, con asiento principal de negocios en:-----

301 E. Central Road, Schaumburg, Illinois 60195-----

y por una contraprestación válida y suficiente, cuyo recibo se acredita en este acto, yo: -----

Leoncio Angel Gonzalez, 0 North 240 Leonard St., Winfield, Illinois 60190-----

(“Cedente”) confirmo mi obligación de vender, ceder y transmitirle al Cesionario y a sus sucesores a título universal y particular, y en este acto vendo, cedo y transmito a ellos la totalidad de nuestro derecho, título e interés: -----

1) sobre las invenciones descriptas en las solicitudes de patente tituladas *CERDA DE CEPILLO DE DIENTES Y PENACHO DE CERDAS* por el que presenté la Solicitud de Patente Provisional de Estados Unidos n.º 62/674.149 el 21 de mayo de 2018 (N.º de expediente del agente: 200700-9637-US01) (en lo sucesivo denominada “solicitud de patente provisional de EE.UU.”);-----

2) sobre la solicitud de patente provisional de EE.UU., sobre cualquier otra solicitud de patente (lo que incluye divisionales, continuaciones, continuaciones en parte, provisionales en virtud del art. 111(b), tít. 35 del U.S.C., 111(a), tít. 35 del U.S.C. y nuevas emisiones) basadas en tales invenciones y sobre la patente o las patentes a ser otorgadas en función de ellas, lo que incluye todo derecho de prioridad basado en tales solicitudes, por la totalidad del término o de los términos por el/los que tal/es patente/s pueda/n otorgarse; -----

3) sobre toda solicitud de patente sobre tales invenciones presentada en cualquier país distinto de los Estados Unidos de América y sobre todas y cada una de las patentes otorgadas para tales solicitudes por la totalidad del término por el que tales patentes puedan otorgarse; y -----

4) con arreglo al Convenio Internacional con respecto a la solicitud de patente provisional de EE.UU. y acuerdo que cualquier solicitud de patente de cualquier otro país del mundo que pudiera presentarse será presentada en el nombre de nuestro Cesionario reivindicando prioridad sobre la solicitud de patente provisional de EE.UU.; y -----

5) sobre todo derecho, sin importar su naturaleza, del Cedente devengado en las fechas de perfeccionamiento consignadas a continuación, antes de ellas o con posterioridad a las mismas, con arreglo a cualquiera de las disposiciones precedentes prescriptas por la legislación aplicable de cualquier jurisdicción, por tratados y convenios internacionales, y por cualquier otro ordenamiento en el mundo. Asimismo reconozco que determinados derechos podrían ya haber sido acumulados por el Cesionario a la luz de tales leyes aplicables; y

6) sobre todas y cada una de las pretensiones y derechos a iniciar acciones, con respecto a cualquiera de los precedentes, devengados en las fechas de perfeccionamiento consignadas a continuación, antes de ellas o con posterioridad a las mismas, lo que incluye todo derecho a percibir y reclamar daños y perjuicios, restitución y demás medidas autosatisfactivas con arreglo a la totalidad del sistema jurídico vigente por infracciones

pasadas, presentes y futuras, malversación de fondos, violaciones, uso indebido o incumplimiento, quedando legitimado más no -----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0284**-----

Solicitud n.º 62/674.149-----

N.º de expediente del abogado: 200700-9637-US01 -----

obligado a entablar acciones en pos de la obtención de aquellas medidas autosatisfactivas en virtud de la totalidad del sistema jurídico vigente y a percibir, o de lo contrario, recuperar compensaciones por cualquiera de tales daños. -----

El Cedente en este acto autoriza al cesionario o al agente a cargo del caso para que inserten en la ubicación apropiada dentro de este documento el número de solicitud y la fecha de presentación de mi solicitud tras el perfeccionamiento de esta Cesión. Asimismo, el Cedente acuerda que el Cedente, a pedido del Cesionario, sus sucesores a título universal y particular o representantes legales, sin que mediare contraprestación adicional al Cedente, suscribirá y otorgará cualquier documento y llevará a cabo cualquier acto lícito que el Cesionario, sus sucesores a título universal y particular o representantes legales pudieran considerar necesario en consecución del objeto de esta Cesión en cualquier país del mundo. Cualquier gasto emergente de la suscripción y otorgamiento de tales documentos y de la realización de tales actos será absorbido por el Cesionario, sus sucesores a título universal y particular o representantes legales. -----

El Cedente en este acto solicita al Comisario de la Oficina de Marcas y Patentes de Estados Unidos y al funcionario pertinente de cualquier otra oficina de patentes o de propiedad intelectual extranjera que emitan toda patente en la forma en que sea otorgada para las solicitudes de patente cedidas en favor del Cesionario, sus sucesores a título universal y particular o representantes legales, y los facultan a tal efecto. -----

Fecha: 29 de junio de 2018 -----

[Firma ilegible] Leoncio Angel Gonzalez -----

Estado de Illinois -----

Condado de Cook -----

Por la presente certifico que Leoncio Angel Gonzalez, quien me consta es la misma persona o son las mismas personas que suscribió / suscribieron el instrumento precedente, compareció / comparecieron ante mí en el día de la fecha y declaró / declararon que tal instrumento fue firmado y otorgado como un acto de la voluntad y libre albedrío de Leoncio Angel Gonzalez, a los fines y efectos allí contenidos. -----

Se extiende el presente, al que estampo mi firma y sello, a los 29 días del mes de junio de 2018. -----

[Firma ilegible] Autoridad Certificante -----

[Sello:] Sello oficial. Karen M. Ragusin. Autoridad Certificante, Estado de Illinois. Mi nombramiento expira el 09 / 09 / 2018.-----

2 de 2-----

[Margen inferior izquierdo:] **INSCRIPTA: 02 / 07 / 2018** -----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0285**-----

ES TRADUCCIÓN FIEL al idioma español del documento en copia digital redactado en idioma inglés, adjunto a la presente, que he tenido a la vista y al que me remito en la Ciudad de Buenos Aires, a los 9 días del mes de julio de 2019. Esta traducción consta de 5 páginas. -----



Martina Canevari Sánchez
Traductora Pública
Idioma Inglés
Mat. Tº XXI Fº 101 Capital Federal
Inscrip. C.T.P.C.B.A. Nro. 8210

TRADUCCIÓN PÚBLICA -----

A 8004973-----

ESTADOS UNIDOS DE AMÉRICA -----

A QUIEN CORRESPONDA: -----

DEPARTAMENTO DE COMERCIO DE LOS ESTADOS UNIDOS-----

Oficina de patentes y marcas de los Estados Unidos -----

7 de junio de 2019-----

POR LA PRESENTE SE CERTIFICA QUE EL DOCUMENTO ADJUNTO ES UNA COPIA FIEL DEL
REGISTRO DE ESTA OFICINA DE UN DOCUMENTO REGISTRADO EL 2 DE JULIO DE 2018. -----

**Por autoridad del Subsecretario de Comercio para la Propiedad Intelectual y del Director de la Oficina
de Patentes y Marcas de los Estados Unidos** -----

[Aparece una firma] W. Montgomery, Funcionario de Certificaciones -----

[Aparece un sello dorado que lee:] Oficina de patentes y marcas de los Estados Unidos. Departamento de
Comercio. -----

504986498 02 / 07 / 2018 -----

HOJA DE PORTADA PARA CESIÓN DE PATENTE -----

Versión electrónica v1.1-----

Versión impresa v1.2 -----

N.º de ID EPAS: PAT5033244-----

TIPO DE PRESENTACIÓN: NUEVA CESIÓN-----

NATURALEZA DE LA TRANSMISIÓN: CESIÓN-----

DATOS DE LA PARTE QUE TRANSMITE-----

Nombre	Fecha de formalización
TORU SAITO	28 / 06 / 2018

DATOS DE LA PARTE QUE RECIBE -----

Denominación:	SUNSTAR AMERICAS, INC.
Domicilio:	301 E. CENTRAL ROAD
Ciudad:	SCHAUMBURG
Estado / país:	ILLINOIS
Código postal:	60195

NÚMERO TOTAL DE TÍTULOS: 1 -----

Tipo de propiedad	Número
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Número de solicitud:	62674149
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DATOS DE CORRESPONDENCIA -----

Número de fax: (312)222-0818 -----

La correspondencia será enviada en primer lugar a la dirección de correo electrónico; si no resultara válida, se procederá al envío usando el número de fax, en caso de haber sido facilitado, si no resultara válido, será enviada a través de correo postal. -----

Teléfono: 312-222-0800-----

Correo electrónico: chiipdocket@michaelbest.com -----

Nombre para correspondencia: MICHAEL BEST & FRIEDRICH LLP-----

Línea de dirección 1: 444 W. LAKE STREET -----

Línea de dirección 2: SUITE 3200-----

Línea de dirección 4: CHICAGO, ILLINOIS 60606-----

N.º de expediente del abogado: 200700-9637-US01 -----

Nombre del presentador: MICHAEL P. SANTONOCITO -----

Firma: / michael p. santonocito / -----

Fecha de la firma: 02 / 07 / 2018-----

Documentos adjuntos totales: 2-----

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[Margen inferior izquierdo:] **504986498**-----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0305**-----

CESIÓN -----

En virtud de mi obligación hacia SUNSTAR AMERICAS, INC. (en lo sucesivo denominada “Cesionario”), una sociedad anónima de Delaware, con asiento principal de negocios en:-----

301 E. Central Road, Schaumburg, Illinois 60195-----

y por una contraprestación válida y suficiente, cuyo recibo se acredita en este acto, yo: -----

Toru Saito, 391 Checker Dr., Buffalo Grove, Illinois 60089-----

(“Cedente”) confirmo mi obligación de vender, ceder y transmitirle al Cesionario y a sus sucesores a título universal y particular, y en este acto vendo, cedo y transmito a ellos la totalidad de nuestro derecho, título e interés: -----

1) sobre las invenciones descriptas en las solicitudes de patente tituladas *CERDA DE CEPILLO DE DIENTES Y PENACHO DE CERDAS* por el que presenté la Solicitud de Patente Provisional de Estados Unidos n.º 62/674.149 el 21 de mayo de 2018 (N.º de expediente del agente: 200700-9637-US01) (en lo sucesivo denominada “solicitud de patente provisional de EE.UU.”);-----

2) sobre la solicitud de patente provisional de EE.UU., sobre cualquier otra solicitud de patente (lo que incluye divisionales, continuaciones, continuaciones en parte, provisionales en virtud del art. 111(b), tít. 35 del U.S.C., 111(a), tít. 35 del U.S.C. y nuevas emisiones) basadas en tales invenciones y sobre la patente o las patentes a ser otorgadas en función de ellas, lo que incluye todo derecho de prioridad basado en tales solicitudes, por la totalidad del término o de los términos por el/los que tal/es patente/s pueda/n otorgarse; -----

3) sobre toda solicitud de patente sobre tales invenciones presentada en cualquier país distinto de los Estados Unidos de América y sobre todas y cada una de las patentes otorgadas para tales solicitudes por la totalidad del término por el que tales patentes puedan otorgarse; y -----

4) con arreglo al Convenio Internacional con respecto a la solicitud de patente provisional de EE.UU. y acuerdo que cualquier solicitud de patente de cualquier otro país del mundo que pudiera presentarse será presentada en el nombre de nuestro Cesionario reivindicando prioridad sobre la solicitud de patente provisional de EE.UU.; y -----

5) sobre todo derecho, sin importar su naturaleza, del Cedente devengado en las fechas de perfeccionamiento consignadas a continuación, antes de ellas o con posterioridad a las mismas, con arreglo a cualquiera de las disposiciones precedentes prescriptas por la legislación aplicable de cualquier jurisdicción, por tratados y convenios internacionales, y por cualquier otro ordenamiento en el mundo. Asimismo reconozco que determinados derechos podrían ya haber sido acumulados por el Cesionario a la luz de tales leyes aplicables; y

6) sobre todas y cada una de las pretensiones y derechos a iniciar acciones, con respecto a cualquiera de los precedentes, devengados en las fechas de perfeccionamiento consignadas a continuación, antes de ellas o con posterioridad a las mismas, lo que incluye todo derecho a percibir y reclamar daños y perjuicios, restitución y demás medidas autosatisfactivas con arreglo a la totalidad del sistema jurídico vigente por infracciones

pasadas, presentes y futuras, malversación de fondos, violaciones, uso indebido o incumplimiento, quedando legitimado más no-----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0306**-----

Solicitud n.º 62/674.149-----

N.º de expediente del abogado: 200700-9637-US01-----

obligado a entablar acciones en pos de la obtención de aquellas medidas autosatisfactivas en virtud de la totalidad del sistema jurídico vigente y a percibir, o de lo contrario, recuperar compensaciones por cualquiera de tales daños. -----

El Cedente en este acto autoriza al cesionario o al agente a cargo del caso para que inserten en la ubicación apropiada dentro de este documento el número de solicitud y la fecha de presentación de mi solicitud tras el perfeccionamiento de esta Cesión. Asimismo, el Cedente acuerda que el Cedente, a pedido del Cesionario, sus sucesores a título universal y particular o representantes legales, sin que mediere contraprestación adicional al Cedente, suscribirá y otorgará cualquier documento y llevará a cabo cualquier acto lícito que el Cesionario, sus sucesores a título universal y particular o representantes legales pudieran considerar necesario en consecución del objeto de esta Cesión en cualquier país del mundo. Cualquier gasto emergente de la suscripción y otorgamiento de tales documentos y de la realización de tales actos será absorbido por el Cesionario, sus sucesores a título universal y particular o representantes legales. -----

El Cedente en este acto solicita al Comisario de la Oficina de Marcas y Patentes de Estados Unidos y al funcionario pertinente de cualquier otra oficina de patentes o de propiedad intelectual extranjera que emitan toda patente en la forma en que sea otorgada para las solicitudes de patente cedidas en favor del Cesionario, sus sucesores a título universal y particular o representantes legales, y los facultan a tal efecto. -----

Fecha: 28 / 06 / 2018-----

[Firma ilegible] Toru Saito-----

Estado de Illinois -----

Condado de Cook -----

Por la presente certifico que Toru Saito, quien me consta es la misma persona o son las mismas personas que suscribió / suscribieron el instrumento precedente, compareció / comparecieron ante mí en el día de la fecha y declaró / declararon que tal instrumento fue firmado y otorgado como un acto de la voluntad y libre albedrío de Toru Saito, a los fines y efectos allí contenidos. -----

Se extiende el presente, al que estampo mi firma y sello, a los 28 días del mes de junio de 2018. -----

[Firma ilegible] Autoridad Certificante -----

[Sello:] Sello oficial. Karen M. Ragusin. Autoridad Certificante, Estado de Illinois. Mi nombramiento expira el 09 / 09 / 2018.-----

2 de 2-----

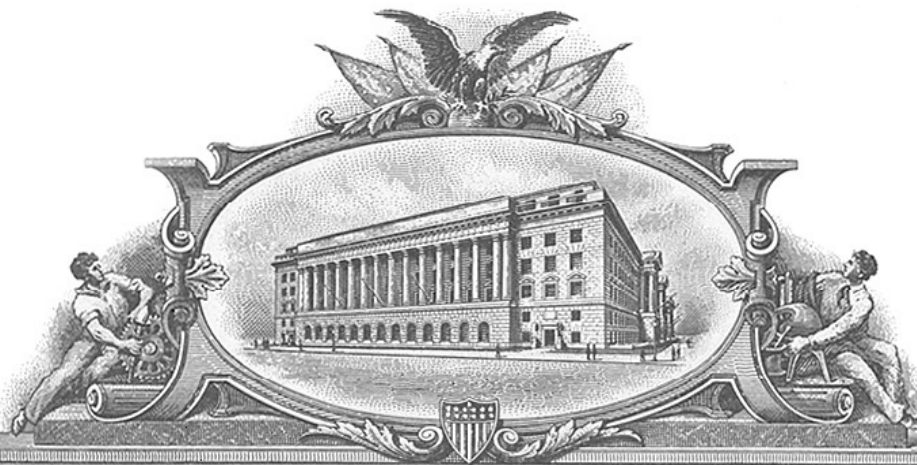
[Margen inferior izquierdo:] **INSCRIPTA: 02 / 07 / 2018** -----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0307**-----

ES TRADUCCIÓN FIEL al idioma español del documento en copia digital redactado en idioma inglés, adjunto a la presente, que he tenido a la vista y al que me remito en la Ciudad de Buenos Aires, a los 9 días del mes de julio de 2019. Esta traducción consta de 5 páginas. -----



Martina Canevari Sánchez
Traductora Pública
Idioma Inglés
Mat. Tº XXI Fº 101 Capital Federal
Inscrip. C.T.P.C.B.A. Nro. 8210



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

10 de junio de 2019

POR LA PRESENTE SE CERTIFICA QUE EL DOCUMENTO ADJUNTO ES UNA COPIA FIEL DE LOS REGISTROS DE LA OFICINA DE PATENTES Y MARCAS DE LOS ESTADOS UNIDOS DE DICHS DOCUMENTOS DE LA SOLICITUD DE PATENTE IDENTIFICADA A CONTINUACIÓN QUE CUMPLIÓ CON LOS REQUISITOS PARA QUE SE LE OTORGARA UNA FECHA DE PRESENTACIÓN EN VIRTUD DE 35 USC 111.

NÚMERO DE SOLICITUD: 62/674,149

FECHA DE PRESENTACIÓN: 21 de mayo de 2018

EL CÓDIGO DE PAÍS Y EL NÚMERO DE SU SOLICITUD DE PRIORIDAD, QUE SE USARÁ PARA LA PRESENTACIÓN EN EL EXTRANJERO EN VIRTUD DE LA CONVENCIÓN DE PARÍS, ES US62/674,149

Por autoridad del
Subsecretario de Comercio para la Propiedad Intelectual
y Director de la Oficina de Patentes y Marcas de los Estados Unidos

JOHN A BURSON

Funcionario certificador



TRADUCCIÓN PÚBLICA-----

A 8004973-----

ESTADOS UNIDOS DE AMÉRICA-----

A QUIEN CORRESPONDA:-----

DEPARTAMENTO DE COMERCIO DE LOS ESTADOS UNIDOS-----

Oficina de patentes y marcas de los Estados Unidos-----

7 de junio de 2019-----

POR LA PRESENTE SE CERTIFICA QUE EL DOCUMENTO ADJUNTO ES UNA COPIA FIEL DEL
REGISTRO DE ESTA OFICINA DE UN DOCUMENTO REGISTRADO EL 2 DE JULIO DE 2018.-----

**Por autoridad del Subsecretario de Comercio para la Propiedad Intelectual y del Director de la Oficina
de Patentes y Marcas de los Estados Unidos**-----

[Aparece una firma] W. Montgomery, Funcionario de Certificaciones-----

[Aparece un sello dorado que lee:] Oficina de patentes y marcas de los Estados Unidos. Departamento de
Comercio.-----

504986482 02 / 07 / 2018-----

HOJA DE PORTADA PARA CESIÓN DE PATENTE-----

Versión electrónica v1.1-----

Versión impresa v1.2-----

N.º de ID EPAS: PAT5033228-----

TIPO DE PRESENTACIÓN: NUEVA CESIÓN-----

NATURALEZA DE LA TRANSMISIÓN: CESIÓN-----

DATOS DE LA PARTE QUE TRANSMITE-----

Nombre	Fecha de formalización
SUPINDA WATCHAROTONE	26 / 06 / 2018

DATOS DE LA PARTE QUE RECIBE-----

Denominación:	SUNSTAR AMERICAS, INC.
Domicilio:	301 E. CENTRAL ROAD
Ciudad:	SCHAUMBURG
Estado / país:	ILLINOIS
Código postal:	60195

NÚMERO TOTAL DE TÍTULOS: 1-----

Tipo de propiedad	Número
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Número de solicitud:	62674149
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DATOS DE CORRESPONDENCIA -----

Número de fax: (312)222-0818 -----

La correspondencia será enviada en primer lugar a la dirección de correo electrónico; si no resultara válida, se procederá al envío usando el número de fax, en caso de haber sido facilitado, si no resultara válido, será enviada a través de correo postal. -----

Teléfono: 312-222-0800-----

Correo electrónico: chiipdocket@michaelbest.com -----

Nombre para correspondencia: MICHAEL BEST & FRIEDRICH LLP-----

Línea de dirección 1: 444 W. LAKE STREET -----

Línea de dirección 2: SUITE 3200-----

Línea de dirección 4: CHICAGO, ILLINOIS 60606-----

N.º de expediente del abogado: 200700-9637-US01 -----

Nombre del presentador: MICHAEL P. SANTONOCITO -----

Firma: / michael p. santonocito / -----

Fecha de la firma: 02 / 07 / 2018-----

Documentos adjuntos totales: 2-----

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[Margen inferior izquierdo:] **504986482**-----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0240**-----

CESIÓN -----

En virtud de mi obligación hacia SUNSTAR AMERICAS, INC. (en lo sucesivo denominada “Cesionario”), una sociedad anónima de Delaware, con asiento principal de negocios en:-----

301 E. Central Road, Schaumburg, Illinois 60195-----

y por una contraprestación válida y suficiente, cuyo recibo se acredita en este acto, yo: -----

Supinda Watcharotone, 440 N. McClurg Ct., Apt. 1116, Chicago, Illinois 60611-----

(“Cedente”) confirmo mi obligación de vender, ceder y transmitirle al Cesionario y a sus sucesores a título universal y particular, y en este acto vendo, cedo y transmito a ellos la totalidad de nuestro derecho, título e interés: -----

1) sobre las invenciones descriptas en las solicitudes de patente tituladas *CERDA DE CEPILLO DE DIENTES Y PENACHO DE CERDAS* por el que presenté la Solicitud de Patente Provisional de Estados Unidos n.º 62/674.149 el 21 de mayo de 2018 (N.º de expediente del agente: 200700-9637-US01) (en lo sucesivo denominada “solicitud de patente provisional de EE.UU.”);-----

2) sobre la solicitud de patente provisional de EE.UU., sobre cualquier otra solicitud de patente (lo que incluye divisionales, continuaciones, continuaciones en parte, provisionales en virtud del art. 111(b), tít. 35 del U.S.C., 111(a), tít. 35 del U.S.C. y nuevas emisiones) basadas en tales invenciones y sobre la patente o las patentes a ser otorgadas en función de ellas, lo que incluye todo derecho de prioridad basado en tales solicitudes, por la totalidad del término o de los términos por el/los que tal/es patente/s pueda/n otorgarse; -----

3) sobre toda solicitud de patente sobre tales invenciones presentada en cualquier país distinto de los Estados Unidos de América y sobre todas y cada una de las patentes otorgadas para tales solicitudes por la totalidad del término por el que tales patentes puedan otorgarse; y -----

4) con arreglo al Convenio Internacional con respecto a la solicitud de patente provisional de EE.UU. y acuerdo que cualquier solicitud de patente de cualquier otro país del mundo que pudiera presentarse será presentada en el nombre de nuestro Cesionario reivindicando prioridad sobre la solicitud de patente provisional de EE.UU.; y -----

5) sobre todo derecho, sin importar su naturaleza, del Cedente devengado en las fechas de perfeccionamiento consignadas a continuación, antes de ellas o con posterioridad a las mismas, con arreglo a cualquiera de las disposiciones precedentes prescriptas por la legislación aplicable de cualquier jurisdicción, por tratados y convenios internacionales, y por cualquier otro ordenamiento en el mundo. Asimismo reconozco que determinados derechos podrían ya haber sido acumulados por el Cesionario a la luz de tales leyes aplicables; y

6) sobre todas y cada una de las pretensiones y derechos a iniciar acciones, con respecto a cualquiera de los precedentes, devengados en las fechas de perfeccionamiento consignadas a continuación, antes de ellas o con posterioridad a las mismas, lo que incluye todo derecho a percibir y reclamar daños y perjuicios, restitución y demás medidas autosatisfactivas con arreglo a la totalidad del sistema jurídico vigente por infracciones

pasadas, presentes y futuras, malversación de fondos, violaciones, uso indebido o incumplimiento, quedando legitimado más no-----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0241**-----

Solicitud n.º 62/674.149-----

N.º de expediente del abogado: 200700-9637-US01-----

obligado a entablar acciones en pos de la obtención de aquellas medidas autosatisfactivas en virtud de la totalidad del sistema jurídico vigente y a percibir, o de lo contrario, recuperar compensaciones por cualquiera de tales daños. -----

El Cedente en este acto autoriza al cesionario o al agente a cargo del caso para que inserten en la ubicación apropiada dentro de este documento el número de solicitud y la fecha de presentación de mi solicitud tras el perfeccionamiento de esta Cesión. Asimismo, el Cedente acuerda que el Cedente, a pedido del Cesionario, sus sucesores a título universal y particular o representantes legales, sin que mediare contraprestación adicional al Cedente, suscribirá y otorgará cualquier documento y llevará a cabo cualquier acto lícito que el Cesionario, sus sucesores a título universal y particular o representantes legales pudieran considerar necesario en consecución del objeto de esta Cesión en cualquier país del mundo. Cualquier gasto emergente de la suscripción y otorgamiento de tales documentos y de la realización de tales actos será absorbido por el Cesionario, sus sucesores a título universal y particular o representantes legales. -----

El Cedente en este acto solicita al Comisario de la Oficina de Marcas y Patentes de Estados Unidos y al funcionario pertinente de cualquier otra oficina de patentes o de propiedad intelectual extranjera que emitan toda patente en la forma en que sea otorgada para las solicitudes de patente cedidas en favor del Cesionario, sus sucesores a título universal y particular o representantes legales, y los facultan a tal efecto. -----

Fecha: 26 / 06 / 2018-----

[Firma ilegible] Supinda Watcharotone-----

Estado de Illinois-----

Condado de Cook-----

Por la presente certifico que Supinda Watcharotone, quien me consta es la misma persona o son las mismas personas que suscribió / suscribieron el instrumento precedente, compareció / comparecieron ante mí en el día de la fecha y declaró / declararon que tal instrumento fue firmado y otorgado como un acto de la voluntad y libre albedrío de Supinda Watcharotone, a los fines y efectos allí contenidos. -----

Se extiende el presente, al que estampo mi firma y sello, a los 26 días del mes de junio de 2018. -----

[Firma ilegible] Autoridad Certificante -----

[Sello:] Sello oficial. Evie Y. Hampton-Averhart. Autoridad Certificante, Estado de Illinois. Mi nombramiento
expira el 01 / 06 / 2019. -----

2 de 2-----

[Margen inferior izquierdo:] **INSCRIPTA: 02 / 07 / 2018** -----

[Margen inferior derecho:] **PATENTE - ROLLO: 046252 IMAGEN: 0242**-----

ES TRADUCCIÓN FIEL al idioma español del documento en copia digital redactado en idioma inglés,
adjunto a la presente, que he tenido a la vista y al que me remito en la Ciudad de Buenos Aires, a los 9 días del
mes de julio de 2019. Esta traducción consta de 5 páginas. -----



Martina Canevari Sánchez
Traductora Pública
Idioma Inglés
Mat. Tº XXI Fº 101 Capital Federal
Inscrip. C.T.P.C.B.A. Nro. 8210

ASSIGNMENT

Pursuant to my obligation to SUNSTAR AMERICAS, INC. (hereinafter referred to as "Assignee"), a Delaware corporation having its principal place of business at:

301 E. Central Road
Schaumburg, Illinois 60195

and for other valuable and sufficient consideration, receipt whereof is hereby acknowledged, I:

Leoncio Angel Gonzalez
0 North 240 Leonard St.
Winfield, Illinois 60190

("Assignor") confirm my obligation to and hereby sell, assign and convey, unto Assignee, its successors and assigns, my entire right, title and interest -

(1) in and to inventions described in patent applications titled TOOTHBRUSH BRISTLE AND BRISTLE TUFT" for which I filed United States Provisional Patent Application No. 62/674,149, on May 21, 2018, (Atty. File No. 200700-9637-US01) (hereinafter the "U.S. provisional patent application");

(2) in and to the U.S. provisional patent application, in and to all other patent applications (including divisional, continuation, continuation-in-part, 35 U.S.C. §111(b) provisional, 35 U.S.C. §111(a), and reissue applications) based upon said inventions, and in and to the patent or patents to be granted thereon, including all rights of priority based on such applications, to the full end of the term or terms for which said patent or patents may be granted;

(3) in and to all patent applications on said inventions filed in countries foreign to the United States of America, and in and to any and all patents granted on said applications to the full end of the terms for which said patents may be granted; and

(4) under the International Convention in respect to the U.S. provisional patent application and agree that any patent applications of any foreign countries which may be filed shall be filed in the name of the Assignee with a claim to priority based on the U.S. provisional patent application; and

(5) in and to all rights of any kind whatsoever of Assignor's accruing before, on, or after the dates of execution below under any of the foregoing provisions provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world, acknowledging that some rights may have already accrued to the Assignee under such applicable laws; and

(6) any and all claims and causes of action, with respect to any of the foregoing, whether accruing before, on, or after the dates of execution below, including all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, misappropriation, violation, misuse, breach or default, with the right but no

obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

Assignor hereby authorizes the assignee or attorney of record to insert in the appropriate place in this document the application number and filing date of my application after execution of this Assignment. Assignor hereby agrees that Assignor will, upon demand of Assignee, its successors, assigns, or legal representatives, and without further consideration to Assignor, execute any and all papers and do all other lawful acts that may be deemed necessary by Assignee, its successors, assigns, or legal representatives, to complete fulfillment of the intent and purposes of this Assignment in any country throughout the world. Any expenses incident to the execution of such papers and performance of such acts shall be paid by the Assignee, its successors, assigns, or legal representatives.

Assignor hereby authorizes and requests the Commissioner of the United States Patent and Trademark Office and the appropriate official of any foreign patent or intellectual property office to issue all patents as shall be granted upon the assigned patent applications to Assignee, its successors, assigns, or legal representatives.

Date June 29, 2018 _____
State of Illinois)
County of Cook)

Leoncio Angel Gonzalez

I do hereby certify that Leoncio Angel Gonzalez, personally known to me to be the same person or persons who signed the foregoing instrument, appeared before me this day and acknowledged that said instrument was signed and delivered as the free and voluntary act of Leoncio Angel Gonzalez, for the uses and purposes therein set forth.

Given under my hand and seal, this 29th day of June 2018.

Karen M. Ragusin
Notary Public





UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

JULY 3, 2018

PTAS

MICHAEL BEST & FRIEDRICH LLP
444 W. LAKE STREET
SUITE 3200
CHICAGO, IL 60606

504986491

UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

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RECORDATION DATE: 07/02/2018

REEL/FRAME: 046252/0283
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 200700-9637-US01

ASSIGNOR:

GONZALEZ, LEONCIO ANGEL

DOC DATE: 06/29/2018

ASSIGNEE:

SUNSTAR AMERICAS, INC.
301 E. CENTRAL ROAD
SCHAUMBURG, ILLINOIS 60195

APPLICATION NUMBER: 62674149

FILING DATE: 05/21/2018

PATENT NUMBER:

ISSUE DATE:

TITLE: TOOTHBRUSH BRISTLE AND BRISTLE TUFT

ASSIGNMENT RECORDATION BRANCH
PUBLIC RECORDS DIVISION

ASSIGNMENT

Pursuant to my obligation to SUNSTAR AMERICAS, INC. (hereinafter referred to as "Assignee"), a Delaware corporation having its principal place of business at:

301 E. Central Road
Schaumburg, Illinois 60195

and for other valuable and sufficient consideration, receipt whereof is hereby acknowledged, I:

Supinda Watcharotone
440 N. McClurg Ct., Apt. 1116
Chicago, Illinois 60611

("Assignor") confirm my obligation to and hereby sell, assign and convey, unto Assignee, its successors and assigns, my entire right, title and interest -

(1) in and to inventions described in patent applications titled TOOTHBRUSH BRISTLE AND BRISTLE TUFT" for which I filed United States Provisional Patent Application No. 62/674,149, on May 21, 2018, (Atty. File No. 200700-9637-US01) (hereinafter the "U.S. provisional patent application");

(2) in and to the U.S. provisional patent application, in and to all other patent applications (including divisional, continuation, continuation-in-part, 35 U.S.C. §111(b) provisional, 35 U.S.C. §111(a), and reissue applications) based upon said inventions, and in and to the patent or patents to be granted thereon, including all rights of priority based on such applications, to the full end of the term or terms for which said patent or patents may be granted;

(3) in and to all patent applications on said inventions filed in countries foreign to the United States of America, and in and to any and all patents granted on said applications to the full end of the terms for which said patents may be granted; and

(4) under the International Convention in respect to the U.S. provisional patent application and agree that any patent applications of any foreign countries which may be filed shall be filed in the name of the Assignee with a claim to priority based on the U.S. provisional patent application; and

(5) in and to all rights of any kind whatsoever of Assignor's accruing before, on, or after the dates of execution below under any of the foregoing provisions provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world, acknowledging that some rights may have already accrued to the Assignee under such applicable laws; and

(6) any and all claims and causes of action, with respect to any of the foregoing, whether accruing before, on, or after the dates of execution below, including all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, misappropriation, violation, misuse, breach or default, with the right but no

obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

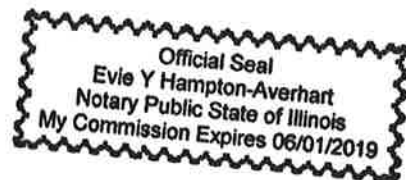
Assignor hereby authorizes the assignee or attorney of record to insert in the appropriate place in this document the application number and filing date of my application after execution of this Assignment. Assignor hereby agrees that Assignor will, upon demand of Assignee, its successors, assigns, or legal representatives, and without further consideration to Assignor, execute any and all papers and do all other lawful acts that may be deemed necessary by Assignee, its successors, assigns, or legal representatives, to complete fulfillment of the intent and purposes of this Assignment in any country throughout the world. Any expenses incident to the execution of such papers and performance of such acts shall be paid by the Assignee, its successors, assigns, or legal representatives.

Assignor hereby authorizes and requests the Commissioner of the United States Patent and Trademark Office and the appropriate official of any foreign patent or intellectual property office to issue all patents as shall be granted upon the assigned patent applications to Assignee, its successors, assigns, or legal representatives.

Date 6/26/2018 _____
Supinda Watcharotone
State of Illinois)
County of COOK)

I do hereby certify that Supinda Watcharotone, personally known to me to be the same person or persons who signed the foregoing instrument, appeared before me this day and acknowledged that said instrument was signed and delivered as the free and voluntary act of Supinda Watcharotone, for the uses and purposes therein set forth.

Given under my hand and seal, this 26th day of June 2018.
Evie Y Hampton-Averhart
Notary Public





UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

JULY 3, 2018

PTAS

MICHAEL BEST & FRIEDRICH LLP
444 W. LAKE STREET
SUITE 3200
CHICAGO, IL 60606

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RECORDATION DATE: 07/02/2018

REEL/FRAME: 046252/0240
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 200700-9637-US01

ASSIGNOR:

WATCHAROTONE, SUPINDA

DOC DATE: 06/26/2018

ASSIGNEE:

SUNSTAR AMERICAS, INC.
301 E. CENTRAL ROAD
SCHAUMBURG, ILLINOIS 60195

APPLICATION NUMBER: 62674149

FILING DATE: 05/21/2018

PATENT NUMBER:

ISSUE DATE:

TITLE: TOOTHBRUSH BRISTLE AND BRISTLE TUFT

ASSIGNMENT RECORDATION BRANCH
PUBLIC RECORDS DIVISION

P-2019/20218

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIRECCIÓN DE NUEVAS CREACIONES

E. S. D.

Ref.: Expediente No. NC2019/0005168

Solicitud de registro de patente de invención a nombre de **SUNSTAR AMERICAS, INC.**

Yo, CAROLINA DAZA MONTALVO, identificada como aparece al pie de mi firma, domiciliada en la Carrera 11 No. 86-53, piso 3, obrando como apoderada de la solicitante de la patente de invención de la referencia, **SUNSTAR AMERICAS, INC.**, en respuesta al Oficio No. 3183 del 27 de mayo de 2019, atentamente me permito presentar los siguientes documentos:

1. **Cesión:** Se allega a este Despacho las cesiones de derechos de los inventores, junto con sus respectivas traducciones a español.
2. **Prioridad:** Así mismo, se adjunta el documento de prioridad solicitado por el Examinador designado.

Habiendo dado cumplimiento al requerimiento de este Despacho, solicito respetuosamente se continúe con el trámite de la referencia.

Atentamente,



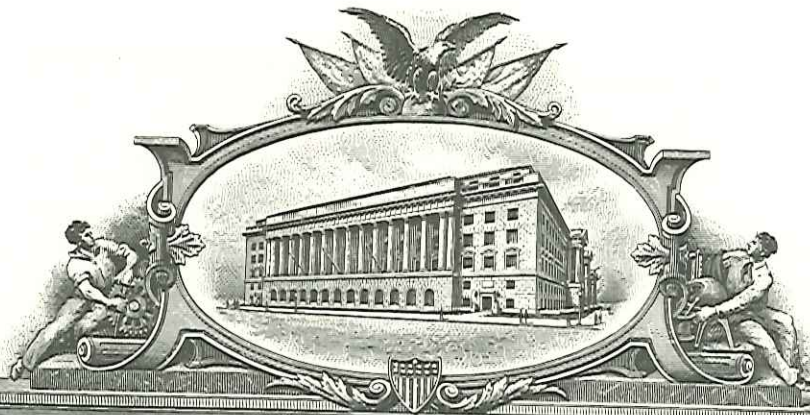
CAROLINA DAZA MONTALVO

C.C. 66.783.790 de Palmira Valle

TP-141563 CSJ

notificaciones@clarkemodet.com.co

PA 8005137



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

June 10, 2019

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE UNDER 35 USC 111.

APPLICATION NUMBER: 62/674,149

FILING DATE: May 21, 2018

THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS US62/674,149

By Authority of the
Under Secretary of Commerce for Intellectual Property
and Director of the United States Patent and Trademark Office




JOHN A BURSON
Certifying Officer

Electronic Acknowledgement Receipt

EFS ID:	32673075
Application Number:	62674149
International Application Number:	
Confirmation Number:	2062
Title of Invention:	TOOTHBRUSH BRISTLE AND BRISTLE TUFT
First Named Inventor/Applicant Name:	Supinda Watcharotone
Customer Number:	1131
Filer:	Michael Peter Santonocito/Elizabeth Tressler
Filer Authorized By:	Michael Peter Santonocito
Attorney Docket Number:	200700-9637-US01
Receipt Date:	21-MAY-2018
Filing Date:	
Time Stamp:	13:51:07
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$280
RAM confirmation Number	052218INTEFSW13523200
Deposit Account	133080
Authorized User	Elizabeth Tressler
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	200700-9637-US01_ADS_filed_5-21-18.pdf	1823145	no	9
			7021a6d4b3380dc53f6d0523f1287460f10bc8b8		

Warnings:

Information:

2	Specification	200700-9637-US01_Prov_Application_filed_5-21-18.pdf	117983	no	7
			833a07ce4a196ffb02312bebb26bdc21d26d34ac		

Warnings:

Information:

3	Drawings-only black and white line drawings	200700-9637-US01_Prov_Drawings_filed_5-21-18.pdf	89222	no	6
			cb81279f0b5fd184f2f8fec08442e2deea312a093		

Warnings:

Information:

4	Fee Worksheet (SB06)	fee-info.pdf	30327	no	2
			4a98bb90552d0767ef3270084b62d39860cd5ee9		

Warnings:

Information:

Total Files Size (in bytes):

2060677

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

TOOTHBRUSH BRISTLE AND BRISTLE TUFT

BACKGROUND

[0001] The present disclosure relates generally to a bristle for a toothbrush. More specifically, the present disclosure relates to a bristle for a toothbrush that is tapered at both ends of the bristle, as well as an asymmetric ("J-hook") tufting arrangement therefor.

BRIEF DESCRIPTION OF THE DRAWINGS

[0002] Detailed and specific features of various embodiments of the present disclosure are more fully disclosed in the following description, reference being had to the accompanying drawings, in which:

[0003] FIG. 1 illustrates several views (a)-(b) of an exemplary toothbrush according to various aspects of the present disclosure;

[0004] FIG. 2 illustrates a bristle tuft arrangement for the exemplary bristle head of FIG. 1;

[0005] FIG. 3 illustrates several views (a)-(b) of another exemplary toothbrush according to various aspects of the present disclosure;

[0006] FIG. 4 illustrates several views (a)-(b) of another exemplary toothbrush according to various aspects of the present disclosure;

[0007] FIG. 5 illustrates a partial cross-sectional view of the above exemplary toothbrushes;

[0008] FIG. 6 illustrates a partial view of an exemplary bristle for use with various aspects of the present disclosure; and

[0009] FIG. 7 illustrates an exemplary bristle arrangement for use with various aspects of the present disclosure.

DETAILED DESCRIPTION

[0010] In the following description, numerous details are set forth. It will be readily apparent to one skilled in the art that these specific details are merely exemplary and not intended to limit the scope of this disclosure.

[0011] The bristles and bristle tufting arrangement according to the present disclosure may be implemented in any type of toothbrush, including but not limited to power toothbrushes,

electric toothbrushes, and manual toothbrushes. FIGS. 1-5 illustrate various examples of toothbrushes that may utilize the bristles and bristle tufting arrangement.

[0012] FIG. 1 illustrates an exemplary toothbrush 100 according to various aspects of the present disclosure. More particularly, the toothbrush 100 is a rechargeable power toothbrush. The toothbrush 100 includes a bristle head section 110 and a body section 120 that are removably attached to one another. The bristle head section 110 comprises a transmission housing 111, an oscillatory rotating disk 112, and a plurality of bristle tufts 113. The transmission housing 111 extends longitudinally from a handle end 114 to a head end 115. The handle end 114 is configured to connect to the body section 120. The head end 115 is configured to support the rotating disk 112. The transmission housing 111 may include one or more (as illustrated, two) circumferential ridges 116, which may act as a grip to assist in the attachment and removal of the bristle head section 110 to/from the body section 120 by a user of the toothbrush 100. The transmission housing 111 defines an internal cavity, which may include a mechanism adapted to receive a shaft associated with the body section 120 and convert motion of the shaft into an oscillation of the rotating disk 112.

[0013] The body section 120 comprises a housing 121 and a charging section 122. The charging section 122 may be an induction charger, a USB charging port, a power adapter socket, and the like, and includes or is operatively connected to a rechargeable battery. One or more of a power switch 123 and an indicator section 124 may be disposed on the housing 121. The power switch 123 may be a push-button type, a slide-actuator type, a rocker type, a touch-sensing type, and the like. When actuated, the power switch 123 causes power to be supplied from the charging section 122 to a motor disposed within the housing 121 to generate motion, such as oscillatory motion. This motion may then be translated to the bristle head section 110, for example by the shaft described above. The indicator section 124 may include one or more indicators, such as LEDs, an LCD display, and/or an audio device. Thus, the indicator section 124 may provide audio, visual, or haptic feedback to the user of the toothbrush 100. This feedback may be indicative of a status of the rechargeable battery (charging / low / full), an activation state of the toothbrush 100 (on / off), and the like.

[0014] FIG. 2 illustrates a rotating disk 200 (which may be, for example, the rotating disk 112) in detail in a top plan view thereof. The rotating disk 200 includes a plurality of bristle tufts 210 disposed in an upper surface thereof, which are categorized as either A-type tufts or B-type

tufts based on their location along the upper surface. Each bristle tuft 210 includes a plurality (for example, 12 to 42) of bristles (which may be, for example, the bristles 113) of a uniform dimension, but the dimension depends on whether the bristle tuft 210 is an A-type tuft or a B-type tuft. Each bristle tuft 210 is attached to the rotating disk 210 at an intermediate point between the ends of the bristles. In this manner, each end of the bristle extends from the upper surface in a manner that will be described in more detail below. A-type tufts may be the same as or different from B-type tufts. For example, A-type tufts may consist of tapered bristles (which will be described in more detail below) and B-type tufts may consist of non-tapered bristles; alternatively, both A- and B-type tufts may consist of tapered bristles or of non-tapered bristles.

[0015] As illustrated in FIG. 2, the bristle tufts 210 are arranged along three concentric virtual circles 221, 222, 223, having respective diameters d_1 , d_2 , d_3 . The rotating disk 200 has a diameter d_r , and each bristle tuft 210 of the rotating disk 200 has a diameter d_t . Along each virtual circle 221-223, bristle tufts 210 are disposed at regular angular intervals. As particularly illustrated, four bristle tufts 210 exist along the inner virtual circle such that they are disposed at intervals θ_1 of 90° ; ten bristle tufts 210 exist along the intermediate virtual circle such that they are disposed at intervals θ_2 of 36° ; and sixteen bristle tufts 210 exist along the outer virtual circle such that they are disposed at intervals θ_3 of 22.5° . Generally, the rotating disk 200 is configured to oscillate to a predetermined maximum rotational displacement (for example, 36°) in either direction.

[0016] FIG. 3 illustrates another exemplary toothbrush 300 according to various aspects of the present disclosure. More particularly, the toothbrush 300 is a manual toothbrush. The toothbrush 300 includes a bristle head 310 and a handle 320 that are of a unitary construction. A plurality of bristle tufts 330, each including a plurality of bristles, are disposed in the bristle head 310. The handle 320 may include surface features such as a rubberized grip formed therein or thereon.

[0017] FIG. 4 illustrates another exemplary toothbrush 400 according to various aspects of the present disclosure. More particularly, the toothbrush 400 is a vibratory toothbrush. The toothbrush 400 includes a bristle head section 410 and a handle section 420 that are removably attached to one another. The bristle head section 410 comprises a bristle carrier 411 and a plurality of bristle tufts 412. The bristle carrier 411 extends longitudinally from a handle end 413

to a head end 414. The handle end 413 is configured to connect to the handle section 420. The plurality of bristle tufts 412 are disposed in the head end 414.

[0018] The handle section 420 comprises a housing 421 and a cap 422. The cap 422 is removable so that a battery may be placed in or removed from the interior of the housing 421. A waterproof seal (not illustrated) may be disposed between the cap 422 and the housing 421 to prevent the entry of water. A power switch 423 is disposed on the housing 421. The power switch 423 may be a push-button type, a slide-actuator type, a rocker type, a touch-sensing type, and the like. When actuated, the power switch 423 causes power to be supplied from the battery to a motor disposed within the housing 421 to generate motion, such as vibratory motion.

[0019] FIG. 5 illustrates a partial cross-sectional view of a tufting arrangement for use with each of the exemplary toothbrushes described above, so as to illustrate how the various bristle tufts are attached. Specifically, FIG. 5 illustrates a bristle carrier 500 such as the bristle head 310 of the toothbrush 300 or the head end 414 of the toothbrush 400. However, the bristle tufts 113 of the toothbrush 100 may be attached to the rotating disk 112 in a manner that is the same as or similar to the manner illustrated in FIG. 5 and described here. The bristle carrier 500 includes a plurality of tuft holes 510 arranged therein. Each tuft hole 510 is sized to receive a bristle tuft.

[0020] FIGS. 6-7 illustrate the bristles that comprise the bristle tufts and the manner in which they may be disposed in the tuft holes 510 of the bristle carrier 500. FIG. 6 illustrates an exemplary bristle 600, a plurality of which constitute a bristle tuft. The bristle 600 includes a bristle shaft 610 which extends between a first end 620 and a second end 630. The bristle 600 has a "double-tapered" configuration; that is, the first end 620 is tapered to a first tip 621 and the second end 630 is tapered to a second tip 631. The bristle 600 is preferably formed of polybutylene terephthalate (PBT) or a similar material. The first end 620 and the second end 630 are shaped to produce the first tip 621 and the second tip 631, respectively, by subjecting the bristle 600 to a chemical or mechanical process.

[0021] In the chemical process, the bristle 600 is partially immersed in a chemical solution that etches away selected material of the bristle 600. For example, the bristle 600 may be slowly immersed in a solution of a PBT-etching chemical and then slowly removed from the solution. In this manner, the amount of exposure, and thus the amount of etching and material removed, of the bristle 600 is greater at points nearer the first tip 621 and the second tip 631 in a controlled manner. The chemical process may occur in a single-dip or double-dip manner. In the single-dip

manner, the bristle 600 may be folded at the longitudinal center of the bristle shaft 610 and then loaded into a carrier. After loading, the folded bristle 600 is immersed in the chemical solution so that the first end 620 and the second 630 are simultaneously etched. In the double-dip manner, the bristle 600 may be loaded into a carrier without folding. After loading, the bristle 600 is immersed in the chemical solution so that only one of the first end 620 and the second end 630 is etched. The bristle 600 is then removed from the chemical solution and rotated, either by rotating the carrier or by unloading, rotating, and reloading the bristle 600 itself. After rotation, the bristle 600 is again immersed in the chemical solution so that the other of the first end 620 and the second end 630 is etched.

[0022] In the mechanical process, the bristle 600 is worked with a tool that physically removes a portion of the material of the bristle 600. For example, the bristle may be held and worked with a blade or with a grinding wheel to produce the tapered shape of the first end 620 and the second end 630. The mechanical process may be used as an alternative to the chemical process, or the tapering of the bristles may be created by a combination of chemical and manufacturing processes.

[0023] As a result of either the chemical process, the mechanical process, or a combination of processes, the bristle 600 is produced with the tapered first tip 621 and the tapered second tip 631. As illustrated in FIG. 6, an exemplary profile of the bristle 600 is such that the diameter of the first end 620 is 0.01 mm at the first tip 621, increasing to 0.08 mm at a distance of 0.5 mm from the first tip 621, and eventually increasing to 0.20 mm at a distance of 4 mm from the first tip 621. The second end 630 is produced with the same or similar dimensions. The diameter of the bristle 600 may increase steadily from the first tip 621 to a midpoint of the bristle and from the second tip 631 to the midpoint of the bristle, such that a total length of each tapered portion may be 4 mm or greater. The increase in diameter may be linear or non-linear, so long as the diameter does not decrease moving from the respective first and second tips 621, 631, to the midpoint of the bristle. While FIG. 6 illustrates particular dimensions, the present disclosure is not so limited. For example, while FIG. 6 illustrates the bristle 600 with a diameter of 0.20 mm (8 mil) and a taper length of 4 mm, the present disclosure may also be implemented with other bristle diameters such as from 0.10-0.22 mm (4-9 mil) and other taper lengths.

[0024] FIG. 7 illustrates an exemplary tufting arrangement of a bristle, where the bristle is constructed as described for the bristle 600. Specifically, FIG. 7 illustrates a bristle carrier 700,

to which a bristle 710 has been attached using a fastener 720. The fastener 720 may be, for example, a staple. While FIG. 7 illustrates only a single bristle 710 for clarity, in practice a plurality (for example, 12-42) of bristles 710 are attached to the bristle carrier 700 with a single fastener 720. As illustrated, the bristle 710 includes a bristle shaft 711 extending between a first end 712 and a second end 713. To fasten the bristle 710 within a tufting hole (not shown) of the bristle carrier 700, the fastener 720 is positioned at an attachment point 714 along the bristle shaft 711 that is offset from the midpoint of the bristle shaft 711, and the bristle 710 is secured by the fastener 720 within the tufting hole.

[0025] As fastener 720 extends into the tufting hole, the fastener 720 and the bristle carrier 700 act on the bristle 710 at the attachment point 714 to cause the first end 712 and the second end 713 to extend in a direction substantially perpendicular to the surface of the bristle carrier 700. Each of the first end 712 and the second end 713 extend from the surface of the bristle carrier 700 by a distance that may be related to the type of toothbrush and the size of the toothbrush head in which the bristle 710 resides. For example, the distance may be determined according to the expression $d_{bt} = \alpha \times d_h$. In this expression, d_{bt} refers to the "bristle tip distance," which is the distance between the upper surface of bristle carrier 700 and the taller end of bristle 710 (as illustrated in FIG. 7, second end 713); d_h refers to the "head dimension," which is the largest diameter of the bristle head (for example, the head length for a rectangular or elliptical brush head or the head diameter for a circular brush head); and α is a proportionality factor having a value between 0.5 and 0.8, inclusive. Preferably, α has a value between 0.6 and 0.7, inclusive. The above dimensions may be subject to a manufacturing tolerance of, for example, ± 1 mm.

[0026] In any event, because the attachment point 714 is not located at the midpoint of the bristle shaft 711, a height difference h exists between the first end 712 and the second end 713. This tufting is referred to as a "J-hook" configuration due to the presence of the height difference h . The ability of a bristle to access difficult-to-reach areas is improved by the particular height difference h . This ability may be measured by: subgingival access efficacy (SAE), which measures the ability to access subgingival areas such as those below the gingival margin; interproximal access efficacy (IAE), which measures the ability to access interproximal areas such as those between teeth; or a combination of SAE and IAE.

[0027] The height difference h is greater than 2.25 mm or, preferably, greater than 2.5 mm. If the height difference h is smaller than this threshold (for example, 2 mm or smaller), various cleaning attributes of the bristle 710, such as access in difficult-to-reach areas, are diminished. If the height difference h is greater than this threshold, however, a toothbrush incorporating the bristles and tufting arrangement exhibits superior SAE, IAE, or both.

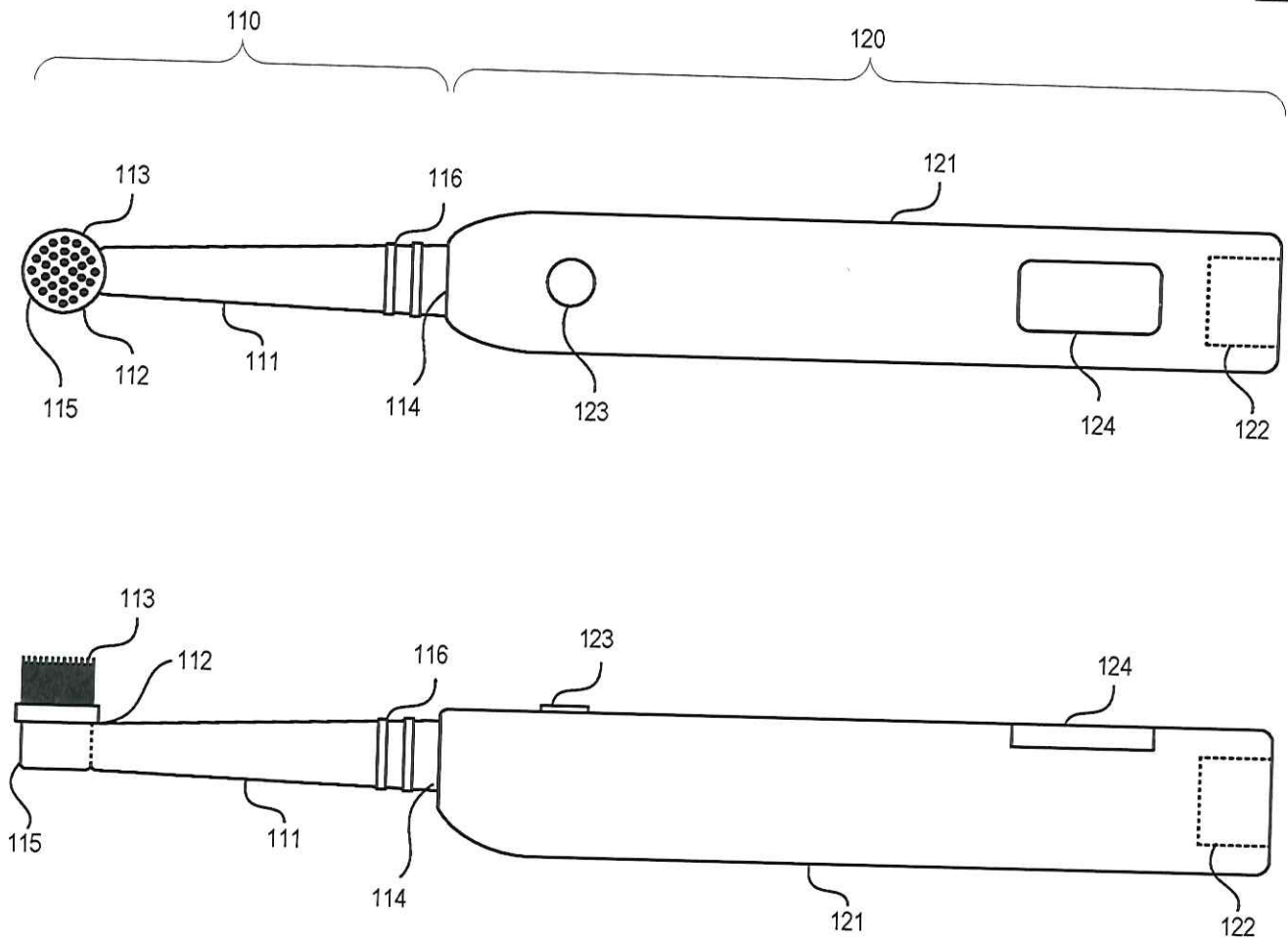


FIG. 1

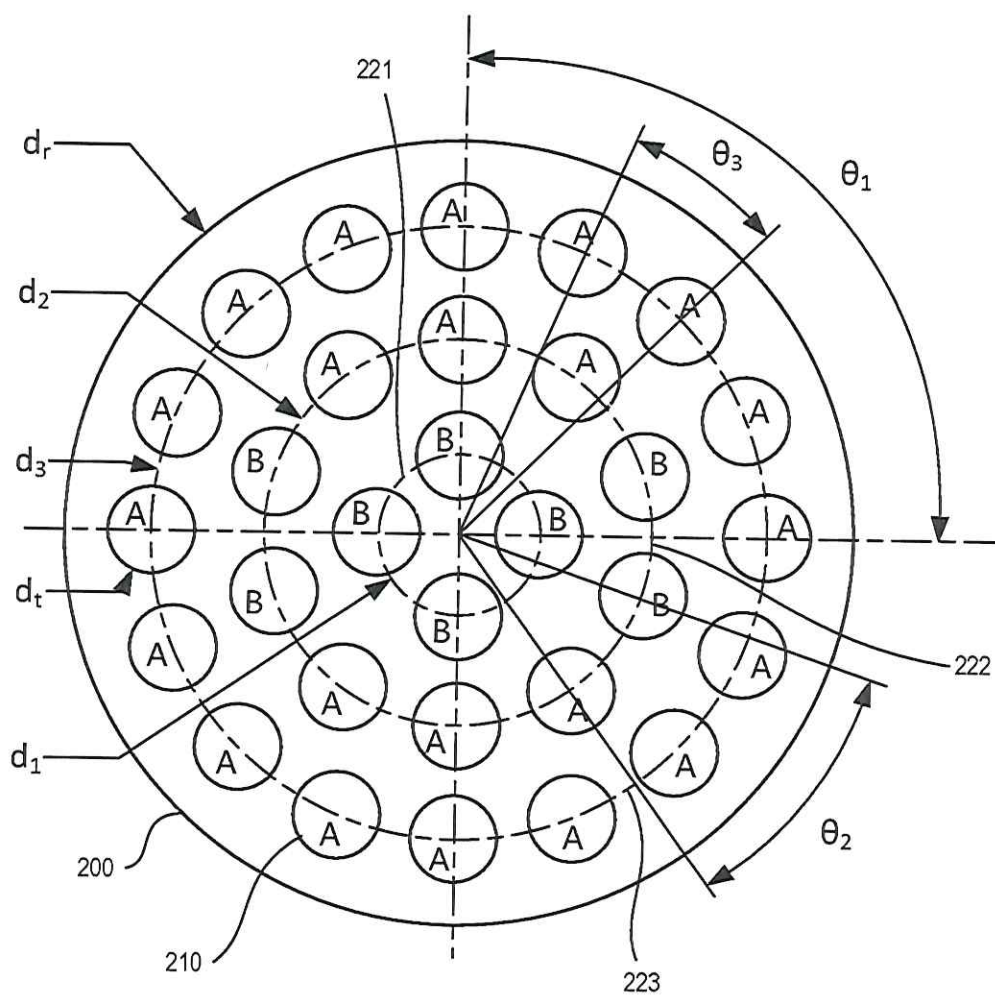


FIG. 2

300

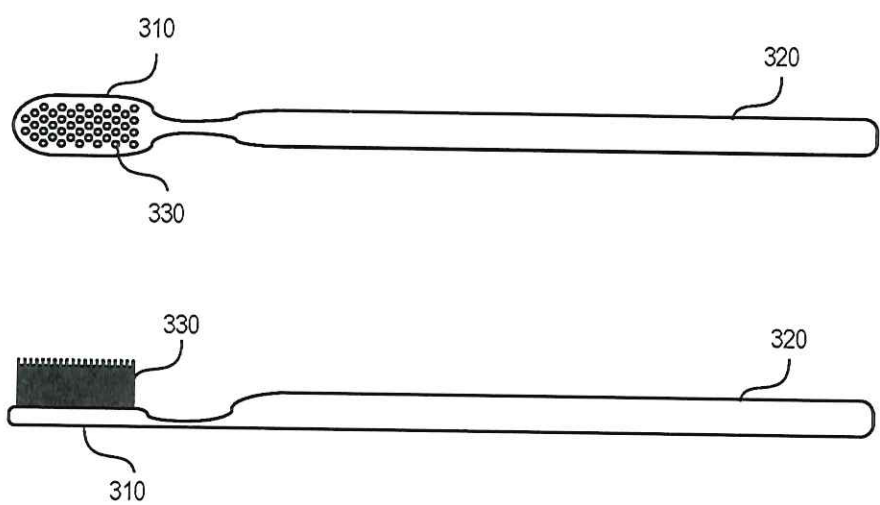


FIG. 3

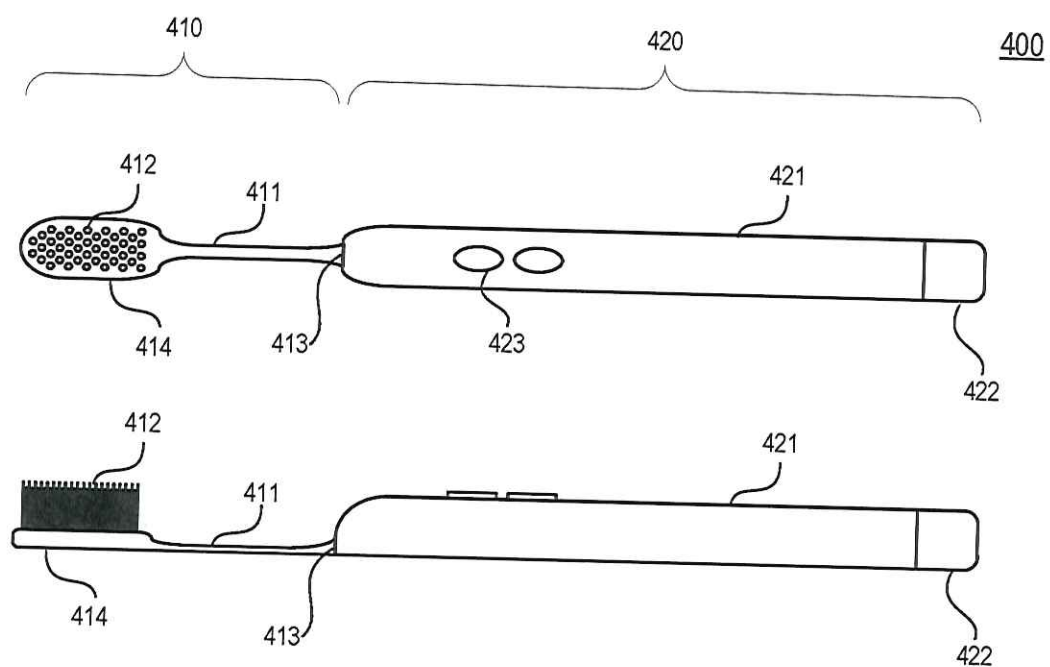


FIG. 4

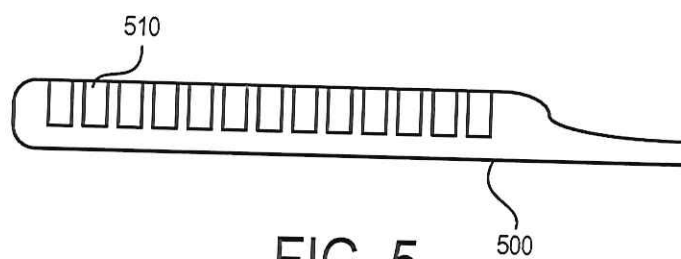


FIG. 5

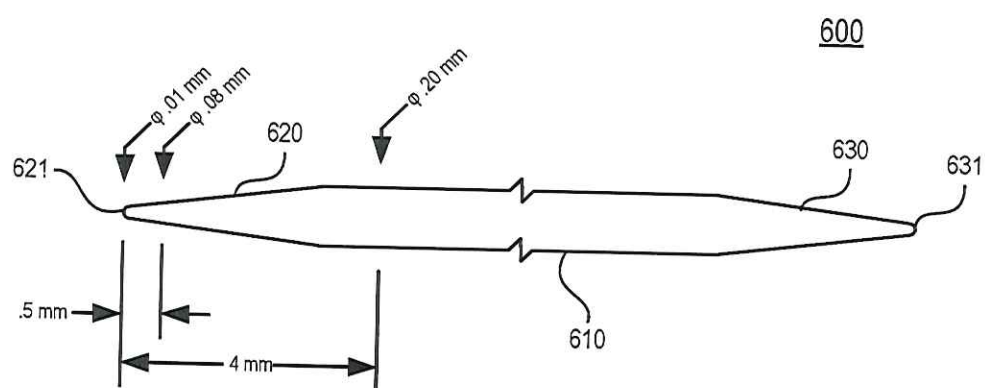


FIG. 6

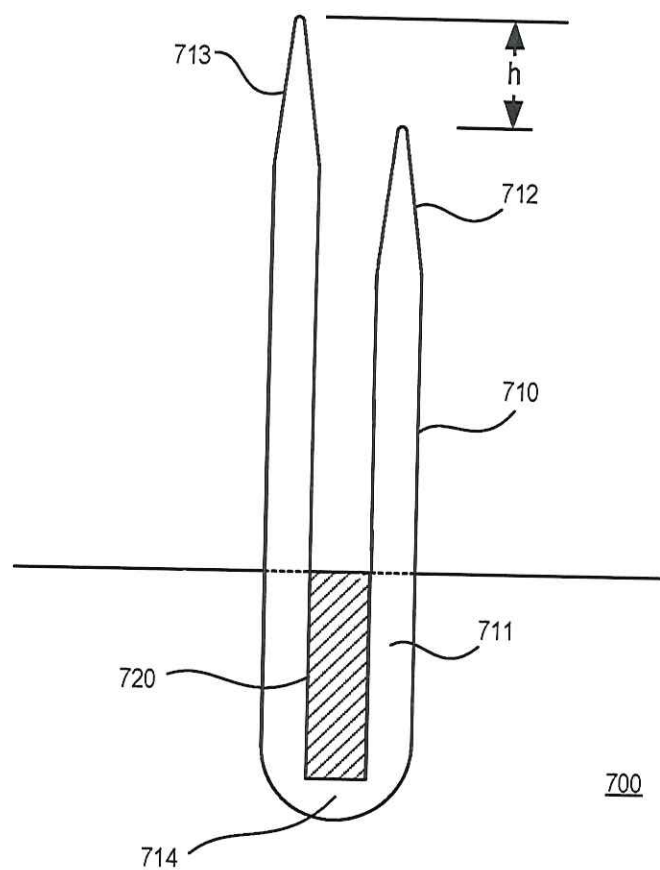


FIG. 7

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	200700-9637-US01
		Application Number	
Title of Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor	1				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Supinda		Watcharotone		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Chicago	State/Province	IL	Country of Residence	US
Mailing Address of Inventor:					
Address 1	440 N. McClurg Ct., Apt. 1116				
Address 2					
City	Chicago	State/Province	IL		
Postal Code	60611	Country i	US		
Inventor	2				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Leoncio	Angel	Gonzalez		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Winfield	State/Province	IL	Country of Residence	US
Mailing Address of Inventor:					
Address 1	0 North 240 Leonard St.				
Address 2					
City	Winfield	State/Province	IL		
Postal Code	60190	Country i	US		
Inventor	3				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Toru		Saito		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	200700-9637-US01		
		Application Number			
Title of Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT				
City	Buffalo Grove	State/Province	IL	Country of Residence	US
Mailing Address of Inventor:					
Address 1		391 Checker Dr.			
Address 2					
City	Buffalo Grove	State/Province	IL		
Postal Code	60089	Country	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					
					Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	1131		
Email Address	chiipdocket@michaelbest.com	Add Email	Remove Email

Application Information:

Title of the Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT		
Attorney Docket Number	200700-9637-US01	Small Entity Status Claimed	☐
Application Type	Provisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Application Data Sheet 37 CFR 1.76

Attorney Docket Number

200700-9637-US01

Application Number

Title of Invention

TOOTHBRUSH BRISTLE AND BRISTLE TUFT

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:

☒ Customer Number

☐ US Patent Practitioner

☐ Limited Recognition (37 CFR 11.9)

Customer Number

1131

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78. When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status

Remove

Application Number

Continuity Type

Prior Application Number

Filing or 371(c) Date
(YYYY-MM-DD)

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.

Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number

Countryⁱ

Filing Date (YYYY-MM-DD)

Remove

Access Codeⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the Add button.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	200700-9637-US01
		Application Number	
Title of Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	200700-9637-US01
		Application Number	
Title of Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	200700-9637-US01
		Application Number	
Title of Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant	1			Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.				
		Clear		
Assignee	Legal Representative under 35 U.S.C. 117		Joint Inventor	
● Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest		
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:				
Name of the Deceased or Legally Incapacitated Inventor:				
If the Applicant is an Organization check here. ☒				
Organization Name	SUNSTAR AMERICAS, INC.			
Mailing Address Information For Applicant:				
Address 1	301 E. Central Road			
Address 2				
City	Schaumburg	State/Province	IL	
Country	US	Postal Code	60195	
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button.				
Add				

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76

Attorney Docket Number

200700-9637-US01

Application Number

Title of Invention

TOOTHBRUSH BRISTLE AND BRISTLE TUFT

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here.

Prefix

Given Name

Middle Name

Family Name

Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1

Address 2

City

State/Province

Country i

Postal Code

Phone Number

Fax Number

Email Address

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the **INITIAL** filing of the application and either box A or B is **not** checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a juristic entity (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature

/michael p. santonocito/

Date (YYYY-MM-DD)

2018-05-21

First Name

Michael

Last Name

Santonocito

Registration Number

71189

Additional Signature may be generated within this form by selecting the Add button.

Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	200700-9637-US01
		Application Number	
Title of Invention	TOOTHBRUSH BRISTLE AND BRISTLE TUFT		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ASSIGNMENT

Pursuant to my obligation to SUNSTAR AMERICAS, INC. (hereinafter referred to as "Assignee"), a Delaware corporation having its principal place of business at:

301 E. Central Road
Schaumburg, Illinois 60195

and for other valuable and sufficient consideration, receipt whereof is hereby acknowledged, I:

Toru Saito
391 Checker Dr.
Buffalo Grove, Illinois 60089

("Assignor") confirm my obligation to and hereby sell, assign and convey, unto Assignee, its successors and assigns, my entire right, title and interest -

(1) in and to inventions described in patent applications titled TOOTHBRUSH BRISTLE AND BRISTLE TUFT" for which I filed United States Provisional Patent Application No. 62/674,149, on May 21, 2018, (Atty. File No. 200700-9637-US01) (hereinafter the "U.S. provisional patent application");

(2) in and to the U.S. provisional patent application, in and to all other patent applications (including divisional, continuation, continuation-in-part, 35 U.S.C. §111(b) provisional, 35 U.S.C. §111(a), and reissue applications) based upon said inventions, and in and to the patent or patents to be granted thereon, including all rights of priority based on such applications, to the full end of the term or terms for which said patent or patents may be granted;

(3) in and to all patent applications on said inventions filed in countries foreign to the United States of America, and in and to any and all patents granted on said applications to the full end of the terms for which said patents may be granted; and

(4) under the International Convention in respect to the U.S. provisional patent application and agree that any patent applications of any foreign countries which may be filed shall be filed in the name of the Assignee with a claim to priority based on the U.S. provisional patent application; and

(5) in and to all rights of any kind whatsoever of Assignor's accruing before, on, or after the dates of execution below under any of the foregoing provisions provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world, acknowledging that some rights may have already accrued to the Assignee under such applicable laws; and

(6) any and all claims and causes of action, with respect to any of the foregoing, whether accruing before, on, or after the dates of execution below, including all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, misappropriation, violation, misuse, breach or default, with the right but no

obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

Assignor hereby authorizes the assignee or attorney of record to insert in the appropriate place in this document the application number and filing date of my application after execution of this Assignment. Assignor hereby agrees that Assignor will, upon demand of Assignee, its successors, assigns, or legal representatives, and without further consideration to Assignor, execute any and all papers and do all other lawful acts that may be deemed necessary by Assignee, its successors, assigns, or legal representatives, to complete fulfillment of the intent and purposes of this Assignment in any country throughout the world. Any expenses incident to the execution of such papers and performance of such acts shall be paid by the Assignee, its successors, assigns, or legal representatives.

Assignor hereby authorizes and requests the Commissioner of the United States Patent and Trademark Office and the appropriate official of any foreign patent or intellectual property office to issue all patents as shall be granted upon the assigned patent applications to Assignee, its successors, assigns, or legal representatives.

6-28-2018
Date

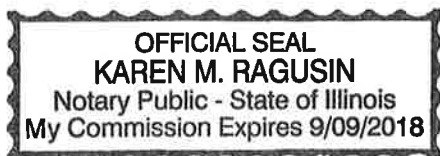
Toru Saito
Toru Saito

State of Illinois)
County of Cook)

I do hereby certify that Toru Saito, personally known to me to be the same person or persons who signed the foregoing instrument, appeared before me this day and acknowledged that said instrument was signed and delivered as the free and voluntary act of Toru Saito, for the uses and purposes therein set forth.

Given under my hand and seal, this 28th day of June 2018.

Karen M. Ragusin
Notary Public





UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

JULY 3, 2018

PTAS

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BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

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ASSIGNOR:
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